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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/577,707

05/02/2006

Tibor Pernecker

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EXAMINER

REDDY, KARUNA P

ART UNIT

PAPER NUMBER

1713

MAIL DATE

DELIVERY MODE

05/09/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/577,707

Applicant(s)

PERNECKER ET AL.

Examiner

Karuna P. Reddy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5/2/206</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Objections

1. Claims 1-2 and 6 are objected to because of the following informality: The term "alkyl (metha)acrylate" in claims 1 (line 12) and 2 (line 32) should read "alkyl (meth)acrylate". The term "... **obtained and/or obtainable**..." should read "... **obtained**...". Appropriate correction is required.
2. Claim 1 recites "... **pH 5 of about 6.5** to about 9." It is not clear as to what range is being claimed. Please make appropriate correction to clarify the range being claimed.
3. Claims 1 and 2 are objected to because of improper grouping of Markush elements. Claims 1 (line 19) and 2 (line 3) recite "...selected from N-vinyl pyrrolidine...; **and/or mixtures**..." and should read "...selected from N-vinyl pyrrolidine...; **or mixtures**...". See MPEP 2173.05(h).

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 recites "... an **effective amount**..." (lines 6, 8 and 20). The term "effective amount" is not defined by

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the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably appraised of the scope of the invention. Claims 2-6 are dependent on independent claim 1.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claims 2-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mallya et al (US 6, 489, 387 B2) in view of Gerst et al (US 6, 254, 985 B1).

Mallya et al disclose a water whitening-resistant pressure sensitive adhesives and is formed by copolymerizing a monomer mixture comprising at least one alkyl acrylate ester of an alcohol containing at least four carbon atoms,

at least one polar comonomer and at least one partially water soluble comonomer (abstract). Alkyl acrylate esters serve to control T_g of the formed polymer and butyl acrylate is a preferred monomer (column 6, lines 31-43) which reads on the hydrophobic monomer of claim 2. A partially water soluble comonomer includes methyl acrylate, ethyl acrylate, methyl methacrylate and the content is preferably above about 7% to about 25% by weight (column 6, lines 49-56) and reads on partially hydrophobic monomer of claim 2. In addition to partially water soluble comonomer, a highly polar monomer is required in the range of from about 1 to about 10% by weight. Acrylic acid and a mixture of acrylic and methacrylic acid are preferred (column 6, lines 61-67) and read on the hydrophilic monomer of claim 2. Other monomers such as styrene may be used to modify the T_g (column 7, lines 30-32). Conventional water soluble free radical initiators can be used for polymerization (column 8, lines 35-36). The surfactants employed during polymerization are important in stabilizing the particles during polymerization and in storage (column 5, lines 40-42). Functional anionic surfactants include salts of sulfated nonyl and octyl phenoxy poly(ethyleneoxy) ethanols (column 5, lines 58-61) and reads on the surfactant of claim 2.

The PSA's of present invention may be employed as adhesives which as part of a label construction have a "no label look". The "no label look" is a printed label which on application to a container, substrate or the like gives the appearance of direct printing (column 2, lines 53-58). In addition to providing a

no label look to transparent and clear face stocks where the resistance of adhesives to whitening of water makes the adhesive uniquely useful for label applications (column 3, lines 33-36).

The prior art of Mallya et al is silent with respect to the amount of styrene in the monomer mixture.

However, Gerst et al teach pressure sensitive adhesives comprising alkyl acrylates and 5 to 30% by weight of monomer b (abstract). Monomers (b) comprise monomers which contain no functional group other than the ethylenically unsaturated group and have a glass transition temperature above 0°C (column 2, lines 20-26). Preferred monomers (b) are methyl methacrylate and styrene (column 2, lines 55-56). It is preferable that T_g of the polymer is from -60°C to +10°C (column 3, lines 18-19). Therefore, it would have been obvious to one skilled in the art at the time invention was made to use styrene in an amount of upto 30% by weight because Mallya et al contemplates adding monomers such as styrene to adjust T_g and Gerst et al have proven successfully the addition of monomer such as styrene in an amount of 5 to 30% by weight to yield a polymer with T_g preferably between -60°C to +10°C and one of ordinary skill in the art would expect styrene in an amount of between 5 to 30% in the pre-emulsion to yield a polymer with a desirable glass transition temperature, motivated by expectation of success.

Claim 2 is written in a product-by-process form and claims 3-6 are dependent on claim 2. Even though product-by-process claims are limited by

and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." See *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) and *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983).

9. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mallya et al (US 6, 489, 387 B2) in view of Gerst et al (US 6, 254, 985 B1) and Phan et al (US 6, 096, 824).

Mallya et al disclose a process (see example 1) where in the pre-emulsion feed soap solution is made by dissolving surfactant in water. A monomer mix was made of 2-ethyl hexyl acrylate, n-butyl acrylate, methyl acrylate and acrylic acid. An aqueous feed solution was prepared by dissolving potassium persulfate in de-ionized water. A kick off solution was prepared by dissolving 0.75 g of potassium persulfate in de-ionized water. The monomer mix was added to the pre-emulsion with mixing. To the reactor charge was added the kickoff initiator solution. Ten minutes after the addition of pre-emulsion feed was started, aqueous feed was added. The latex was neutralized with a dilute ammonium hydroxide solution to a pH of 7.9. The functional anionic surfactants include copolymerizable surfactants (column 5, line 65-66). Other monomers such as styrene may be used to modify the T_g (column 7, lines 30-32).

The prior art of Mallya et al is silent with respect to the amount of styrene in the monomer mixture, differs in the order in which components are mixed together and in the type of surfactant.

However, Gerst et al teach pressure sensitive adhesives comprising alkyl acrylates and 5 to 30% by weight of monomer b (abstract). Monomers (b) comprise monomers which contain no functional group other than the ethylenically unsaturated group and have a glass transition temperature above 0°C (column 2, lines 20-26). Preferred monomers (b) are methyl methacrylate and styrene (column 2, lines 55-56). It is preferable that T_g of the polymer is from -60°C to +10°C (column 3, lines 18-19). Therefore, it would have been obvious to one skilled in the art at the time invention was made to use styrene in an amount of upto 30% by weight because Mallya et al contemplates adding monomers such as styrene to adjust T_g and Gerst et al have proven successfully the addition of monomer such as styrene in an amount of 5 to 30% by weight to yield a polymer with T_g preferably between -60°C to +10°C and one of ordinary skill in the art would expect styrene in an amount of between 5 to 30% in the pre-emulsion to yield a polymer with a desirable glass transition temperature, motivated by expectation of success.

As to the polymerizable surfactant having terminal allyl amine moiety, Phan et al teach emulsion polymer comprising water-soluble or water-dispersible polymerizable surfactant having a terminal allyl amine moiety. Phan et al also teach that conventional surfactants are used to control latex particle size,

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stabilize the latexes at high solids content and are physically adsorbed onto the surface of particles. Under high shear or under a few cycles of freeze thaw tests such surfactants can be desorbed and result in the loss of stabilizing properties. Therefore, it would have been obvious to one skilled in the art at the time invention was made to use a polymerizable surfactant having terminal allyl amine moiety because Mallya et al contemplate using copolymerizable surfactants and Phan et al have proven successfully emulsion polymerization of ethylenically unsaturated monomers with copolymerizable surfactants having terminal allyl amine moiety and one of ordinary skill in the art would expect a polymerizable surfactant having terminal allyl amine moiety to work for the emulsion polymerization of per-emulsion of Mallya et al in view of Gerst, motivated by success.

As to the order of combining various components, the composition is substantially similar to that of the prior art though the sequence of mixing components differs. Therefore, it would have been obvious to one skilled in art at the time invention was made to alter the sequence and essentially arrive at the instant claim, absent evidence of unexpected results. See *In re Burhans*, 154 F.2d 690, 69 USPQ 330 (CCPA 1946) (selection of any order of performing process steps is prima facie obvious in the absence of new or unexpected results); *In re Gibson*, 39 F.2d 975, 5 USPQ 230 (CCPA 1930) (Selection of any order of mixing ingredients is prima facie obvious.).

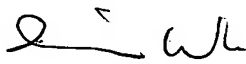
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karuna P. Reddy whose telephone number is (571) 272-6566.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Karuna P Reddy
Examiner
Art Unit 1713


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